

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>		1. CONTRACT ID CODE	PAGE 1 OF 1 PAGES
2. AMENDMENT/MODIFICATION NO. 000002	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
6. ISSUED BY NASA Stennis Space Center Office of Procurement Building 1100 Room 251 H Stennis Space Center, MS 39529-6000		7. ADMINISTERED BY (If other than Item 6) Same as block #6	
8. NAME AND ADDRESS OF CONTRACTOR (No. Street, county, State and ZIP: Code)		(✓) 9A. AMENDMENT OF SOLICITATION NO. NNS10ZDA003R	9B. DATED (SEE ITEM 11) 3/10/1020
		10A. MODIFICATION OF CONTRACT/ORDER NO.	
		10B. DATED (SEE ITEM 13)	
CODE	FACILITY CODE		

## 11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☒ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning one (1) copy of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATA SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and data specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

N/A

## 13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
D. OTHER Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not, ☒ is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

This amendment is issued for the following:

- As a result of the organized site visit, a new cut-off date for submission of written questions is established. **All offeror questions regarding subject solicitation must be submitted no later than 3pm local time (Central) on April 2, 2010.** Questions submitted after this date/time will not be accepted. Questions will be accepted via e-mail only to: carol.l.west@nasa.gov (cc: robert.s.harris@nasa.gov). Faxed or telephoned questions will not be accepted.
- As clarification, Amendment 00001 did extend the proposal due date to April 9, 2010, 3pm local time (Central)
- Attachment 1 provides questions submitted and the NASA response for each.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Carol L. West	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
(Signature of person authorized to sign)		BY (Signature of Contracting Officer)	

1. Question: Please note that Caterpillar is currently quoting delivery (f.o.b. factory) of (20) weeks ARO. Assuming a timely award of this solicitation package, this would indicate engine delivery late in September 2010. Is this acceptable to NASA?

Response: The government acknowledges that engine delivery is 20 weeks ARO.

Using Dwg. 31B00-M001 Rev. 0A as a reference please confirm the following:

2. Question: What grade of carbon steel is the outer shell of the LOX Tank assembly?

Response: The outer shell material and grade is ASTM A285 grade C, FBX

3. Question: Please confirm whether the outer shell is considered a pressure vessel for welding purposes?

Response: The outer shell (vacuum jacket) is not considered a pressure vessel per NASA-STD-8719.17. SPR 1740.1 requires repairs and alterations to non-code stamped items be made by an ASME "R" stamped shop to the intent of API 510. SSC Inspection should be involved with the approval of procedures, execution and acceptance of repairs to the outer shell.

4. Question: Work item 11.3 tasks the Contractor to replace all pipe saddles, pipe hangers and supports with new stainless steel material. Since the structures will be welded to the outer shell, please confirm what testing, if any, of the outer shell is required after all welding to the shell is completed?

Response: Dye penetrant testing of the final weld and heat affected zone will be required of any welds made to the base metal of the outer shell. Testing shall be performed by qualified individuals with a level II certification with the requirements of ASNT-TC-1A.

5. Question: Work item 11 tasks the Contractor to replace all existing deluge piping with new stainless steel piping and fittings. Please clarify what grade of stainless steel is to be used?

Response: Dual grade ASTM A 312, 304/304L

6. Question: After installation and testing is complete, is it the intention of the specification package that the new stainless steel piping system and foundations be blasted and coated, or left uncoated?

Response: If the stainless steel construction is painted, the paint shall not contribute to the degradation of the stainless steel material, for example certified low chloride coatings.

7. Question: Port and Starboard Exhaust Stack Are the stacks bolted or welded?

Response: Bolted.

8. Question: Overboard Discharge Line Valves Do you have a list of the sizes and number of sea valves?

Response: See attachment (Valves)

9. Question: Rudder Post Main and Flanking Do you have a detailed drawing of the existing (i.e. steering post, cross section, elevation)?

Response: See attachment (rudder post). Cross section is not available.

10. Question: Steering Components Aft Deck, Will you provide details for strengthening method?

Response: No.

11. Question: Additional Work Price Quotes, Rudder Repairs Do you have a detailed rudder and stock drawing (i.e. how put together)?

Response: No.

After reviewing the Repair Specification (31D00-G005 Rev. 4) for the NASA Pushboat CLERMONT II, we have the following questions and requests for clarification:

12. Question: Item 3.2.I.J (pg. 5) tasks the Contractor to test and repair the (4) Fernstrum coolers. Please specify the required hydrostatic test pressure? Please confirm whether any repairs will be treated as additional work? If not, please specify the percentage of failures to allow for in the cost estimate?

Response: After cleaning and inspection, the Contractor will test the coolers to 8 PSI hydrostatic pressure. If leaks are detected, the Contractor will provide a cost estimate under a Field Change Request (FCR) to make the necessary repairs to resolve the leakage.

13. Question: Item 3.2.I.M (pg. 7) tasks the Contractor to repair "disturbed areas in the aft ballast tank after repair in the tank." So far as can be discerned, there do not appear to be any repairs called out in this tank. Please clarify the intent of this requirement so that a cost estimate can be developed? How does this requirement differ from that in Item 4.1.C (pg. 16)?

Response: Item 4.1.C (page 16) is a requirement for cleaning and painting of the tank only. Contractor is to inspect tank and provide the COTR with results of inspection. Any repairs will be handled under a Field Change Request (FCR).

14. Question: Item 3.2.I.N (pg. 7) (Aft Void tank): Same questions as in question (2) above.

Response: Item 4.1.C (page 16) is a requirement for cleaning and painting of the tank only. Contractor is to inspect tank and provide the COTR with results of inspection. Any repairs will be handled under a Field Change Request (FCR).

15. Question: Item 3.2.I.O (pg. 7) (Forward Storage Void): Same questions as in question (2) above.

Response: Item 4.1.C (page 16) is a requirement for cleaning and painting of the tank only. Contractor is to inspect tank and provide the COTR with results of inspection. Any repairs will be handled under a Field Change Request (FCR).

16. Question: Item 3.2.I.P (pg. 7) (Forward Ballast tank): Same questions as in question (2) above.

Response: Item 4.1.C (page 16) is a requirement for cleaning and painting of the tank only. Contractor is to inspect tank and provide the COTR with results of inspection. Any repairs will be handled under a Field Change Request (FCR).

17. Question: Item 3.2.I.R (pg. 8) (Potable Water Tank): Same questions as in question (2) above.

Response: The potable water tank should only require wash down and cleaning. Any work performed on surrounding equipment which affects the potable water tank interior will be handled by FCR.

18. Question: Item 3.2.I.T (pg. 8) tasks the Contractor to clean and coat disturbed areas of fuel tank vent pipe. Please clarify the number of vents to be treated, pipe sizes and lengths?

Response: The fuel tank has one (1) each vent pipe on the port and starboard sides of the main deck cabin. Each vent pipe is 2" diameter X 8'-0" long with a flame arrestor on the top end of the pipes. There are two (2) main fuel filler pipes located on the main deck. The fuel fill pipes are 6" diameter X 17" tall. The fuel filler pipes are contained within a fuel spill containment box that has dimensions of 18" tall X 13" deep X 24" long.

19. Question: Item 3.2.I.V (pg. 8) tasks the Contractor to remove and subsequently reinstall window assemblies and glass windows from exterior doors. Please clarify the number of windows and doors to be so treated?

Response: Main Deck: 4 windows and 4 doors; Upper Deck: 2 doors and 4 windows; Lower Wheelhouse: 15 windows and 2 doors; Upper Wheelhouse: 2 doors and 10 windows.

20. Question: Item 3.2.I.W (pg. 8) tasks the Contractor to make certain repairs to fendering in way of the bow. Please clarify whether the Contractor is required to provide any new rubber fendering? Please confirm the total length of fendering to be reattached to the hull structure?

Response: New fendering is required. The length is 40 L. F.

21. Question: Item 3.2.II.C (pg. 9) tasks the Contractor to service overboard discharge valves. Please clarify the total number of valves to be serviced, including types and sizes?

Response: See attached chart for valve information.

22. Question: Item 3.2.II.D (pg. 9) tasks the Contractor to open, inspect and accomplish certain repairs to the centerline sea chest. Is a drawing of this sea chest available? Please confirm the total number of pieces of pipe to allow for replacement, including sizes and lengths? This item further requires the Contractor to provide new water lines for the main engines and gear boxes. Please clarify what is specifically required (pipe sizes, schedules, valves, strainers, etc.)? Is this piping intended to replace the Fernstrum coolers for the main engines that are currently installed?

Response: A drawing of the sea chest is not available. Contractor to inspect centerline seachest and provide report to COTR. Any repairs will be handled by FCR.

23. Question: Item 3.2.II.G (pg. 10) tasks the Contractor to make certain repairs and modifications to the "Rudder Post, Main and Flanking". Please provide a drawing of the existing rudder post bearing housing. Is it the Customer's intention that the Contractor should provide and install (12) new Orkot bearings for the rudders? Is it the Customer's intention that the Contractor should repair and remanufacture the (6) existing rudder stocks to conform to the new bearing arrangement? Please provide a drawing to define the (6) wear plates that will require machining? Please provide dimensions for both upper and lower replacement Orkot bearings (ID x OD x length). Please clarify the relationship between this item and Optional item 5.0.D?

Response: No drawing of the rudder post housing is available. Contractor shall provide and install (12) new Orkot bearings for the rudders. Contractor shall repair and remanufacture the (6) existing rudder stocks to the new bearing arrangement. See attached Rudder post.pdf drawing for dimensions of the rudder stock and bearings. No drawings are available for wear plates.

24. Question: Item 3.2.II.H (pg. 10) tasks the Contractor to strengthen certain foundations in way of the existing steering gear components. Is it the Customer's intention that existing steel structure is to be replaced, or is it intended that new stronger foundations should be designed and installed?

Response: Contractor to repair any steering gear component damage.

25. Question: Item 3.2.II.J (pg. 11) tasks the Contractor to provide new engine instruments in the lower and upper wheel houses. Please clarify whether this is for the existing Cummins engines or for the "Optional" replacement engines? The title of this item appears to include the gear box instrumentation, although the specification itself does not address the gear boxes. Please clarify?

Response: The instrumentation will be for the new engines if this option is awarded.

26. Question: Item 3.2.II.K (pg. 11) tasks the Contractor to accomplish an alignment of the main propulsion system (engine, gear box and shafting) after all steel repairs to the hull have been completed. Please clarify the type and nature of steel renewals that are anticipated, as there does not seem to be any significant hull structural renewals called out in the specification. Please clarify whether the alignment should be priced based upon new (GFM) shafting, new (GFM) gear boxes and existing main engines that have not been removed from the vessel, or some other combination of components?

Response: Any steel renewal will be completed under FCR following inspection of main propulsion system structure. Alignment of new shafting, gear boxes and existing main engines is required for the base bid of this procurement.

27. Question: Item 3.2.II.N (pg. 12) tasks the Contractor to provide and install new main engine mufflers and expansion joints. Please provide details of the existing mufflers and expansion joints? If (Optional) new engines are installed, will this work item be expected to cover the costs associated with new different and possibly larger mufflers and expansion joints, together with exhaust piping modifications?

Response: No drawings of existing exhaust system are available. This item is expected to cover costs of new exhaust system with the new engines.

28. Question: Item 3.2.II.O (pg. 12) tasks the Contractor to install a new radar system. Please clarify whether an existing radar system will be removed? Please confirm the arrangement of the proposed new radar system: radar console in the lower wheel house, repeater in the upper wheel house and transceiver on the roof of the upper wheel house? Please advise whether new foundations will be required for any of the new components? Is adequate power available in the lower wheel house to support the new installation, or will new power cable be required from the engine room switchboard? Will the new equipment require power supply from dual sources (emergency power)? If so, please advise what power source is available?

Response: The Contractor shall remove old radar unit from the upper wheelhouse. Leave new unit in the port side lower wheelhouse and install new slave unit in upper wheelhouse including any cabling between both units.

29. Question: Item 3.2.II.P (pg. 13) tasks the Contractor to replace the existing potable water lines with copper pipe. Are any drawings beyond 31D00-M001 and 31D00-M002 available to define the piping to be replaced? Please confirm that piping to be replaced includes both cold and hot water piping? Please confirm what type / style of valves are to be installed in the new piping runs to replace existing valves? Is copper tubing an acceptable alternative to rigid copper pipe? Please confirm whether piping runs above the Main Deck are run in the open or are they behind existing joiner paneling?

Response: Delete this section from the specification. No replace of potable water piping required.

30. Question: Item 3.2.II.Q (pg. 13) tasks the Contractor to provide and install a new fire and engine alarm system in the engine room with monitoring panels in both the upper and lower wheel houses. Please define what alarm conditions (thermal, smoke, flooding, etc.) are to be included in the alarm system?

Response: - If new engines are installed, engine alarms will be fire, smoke, flood for both upper and lower wheelhouses. New engines will have oil pressure, water temperature, tachometer gauges installed in the upper and lower wheelhouses and engine room.

31. Question: Item 4.1.C (pg. 16) tasks the Contractor to make repairs to existing coating systems in essentially all internal spaces, with the exception of the fuel storage tanks. To permit realistic estimates to be prepared, please clarify the following:

In the engine room, are all structural surfaces to be included, or only the area (bilges) below the floor plates to be preserved?

Estimated percent of failed coatings in the engine room?

Estimated percent of failed coatings in the Aft Ballast Tank?

Estimated percent of failed coatings in the Aft Void?

Estimated percent of failed coatings in the Forward Void (Storage)?

Estimated percent of failed coatings in the Forward Ballast Tank?

Response: All surfaces of various tanks, voids or compartments as required per this specification section will be cleaned per Item 4.1.c before being repainted per the specified coating system.

32. Question: Item 4.1.D (pg. 16) tasks the Contractor to make repairs to existing coatings in the Potable Water Tank. Please provide the estimated percentage of failed coatings in this tank? Should the Contractor allow for rechlorination of this tank after all work is completed, or will this be accomplished by the crew?

Response: All surfaces of Potable water tanks shall be cleaned and recoated per Item 4.1.d Tanks will be cleaned, re-chlorinated and ready for service.

33. Question: Item 4.1.E (pg. 17) tasks the Contractor to preserve the exterior surfaces of the Topside surfaces. The photograph of the vessel on the Repair Specification indicates that there is a color differentiation on various surfaces in this area. Please provide a clarification of what surfaces are to be coated with other than PSX 1001 as a topcoat? Please clarify that SP8 in para (2) of this item should read SP2?

Response: Paragraph 2, SP8 should read SP3 and SP2. Exterior cabins, stacks and upper wheelhouse final color are to be Haze grey per specifications

34. Question: Item 4.1.F (pg. 18) tasks the Contractor to preserve various surfaces including the Upper wheel house. The specification indicates that the wheel house should be top coated with Amercoat 235 Haze Gray. The photo of the vessel would seem to indicate that it is in fact painted white. Please confirm the intent of this

specification? Please confirm whether the other external decks (01 Level, Lower Wheel House & Upper Wheel House) should be included in this item?

Response: All deck houses, main, second, lower wheelhouse will have a white coat.

Upper wheelhouse will be painted white. Bullwork interior, main deck, lower wheelhouse deck, stoop and stairs and upper wheelhouse deck will be painted haze gray. Ladder and elevator frame work and rail will also be painted hazed gray. Deck bits and roller chock are included in gray painting.

35. Question: Item 5.0.A (pg. 18) tasks the Contractor to offer an alternative Tier 2 compliant engine to repower the vessel. Please advise what submissions (data, certificates, etc.) the Customer will require with the original price submission? The item, as written, identifies a benchmark weight of 8,700 lbs for the existing main engines. Please confirm whether this is a dry or wet weight?

Response: All data to verify the submission meets the engine specifications requested. The engine weight is Wet weight.

36. Question: Item 5.0.D (pg. 19) tasks the Contractor to offer to replace rudder stocks on either the main or flanking rudders, including acquisition of (2) pieces of 6" diameter Aquamet 18 stock. Please specify the lengths of the stock required? The item requires further that the Contractor to remove the existing stock from one or more rudders. Please provide a drawing that details the attachment between the rudder stock and blade?

Response: The stock for main rudders will be 8'-0" long. The length of the flanking rudders will be 8'-0" long. No drawings available.

37. Question: Item 5.0.E (pg. 20) tasks the Contractor to offer to replace the existing cooler grid grate. Please provide a drawing of the existing grid grate?

Response: 12'-0" of 3/8" thick X 2" wide one of 3/8" thick X 2" wide 190" long for each cooler grid. There are no drawings for the cooler grid.

NNS10ZDA003R  
Amendment 00002  
Attachment 2

SMALL SEA CHEST FOR A/C & HEATER:

VALVE TYPE	MODEL	SIZE	QTY	CONN	CLASS	BODY MAT'L	STEM	SEAT	DISC	PRESSURE	TEMP	MFG'R
GATE	N/A	1"	1	FNPT	150 WOG	WCB	N/A	N/A	N/A	N/A	N/A	RP & C VALVE CO.
GATE	N/A	1 1/4"	2	FNPT	150 WOG	WCB	N/A	N/A	N/A	N/A	N/A	RP & C VALVE CO.

MAIN SEA CHEST:

VALVE TYPE	MODEL	SIZE	QTY	CONN	CLASS	BODY MAT'L	STEM	SEAT	DISC	PRESSURE	TEMP	MFG'R
GATE	N/A	2"	1	FLANGE	150 WOG	WCB	CR13	HF	CR13	65 PSI	850 F	CRANE
GATE	N/A	1 1/2"	1	FNPT	150 WOG	C. STL.	N/A	N/A	N/A	N/A	N/A	RP & C VALVE CO.
GATE	N/A	2"	1	FNPT	150 WOG	A105	CR13	HF	CR13	100 PSI	N/A	VOGT VALVE CO.
GATE	EF56D	1"	4	FNPT	800 WOG	A105N	CR13	CR13/HF	CR13	N/A	N/A	RP & C VALVE CO.
GATE	59	4"	1	FLANGE	175 WOG	C. STL.	N/A	N/A	N/A	N/A	N/A	ROCKWELL NORSTROM

# ATTACHMENT A

TUG M/V CLERMONT  
BEARING READINGS  
LYNN'S MACHINE WORKS. 12-18-2000

